

REMARKS

The application has been amended and is believed to be in condition for allowance.

Withdrawal of the finality of the Official Action is solicited.

Entry of this amendment is solicited.

Rejections Under 35 USC 112

Claims 1-2 were previously amended to address the noted informality and the stated basis of the section 112, second paragraph rejection of the last Official Action.

This Official Action now rejects claims 1-4 and 6-21 under section 112, second paragraph, as being indefinite with functional or operational language.

As to the previously pending claims, this is a new rejection that could have been made as part of the last Official Action, and was not necessitated by applicants' action. Therefore, the present Official Action should be non-final.

Claim 7 is rejected under section 101 as being directed to non-statutory subject matter. This is a new rejection that could have been made as part of the last Official Action, and was not necessitated by applicants' action. Therefore, the present Official Action should be non-final for this additional reason.

Withdrawal of the finality of the Official Action is solicited.

The claims have been amended to address the pending section 112 rejections without the entry of new matter and so as to narrow the pending issues.

Entry of this amendment is solicited.

Withdrawal of the rejections is solicited.

Rejections Under 35 USC 103

Claims 1-4, 6-9, 11-18, 20 and 21 were rejected as obvious over RIVARD 6,554,831 in view of LAHILLE 5,380,325 and MIRKOVIC 5,254,118.

Claims 10 and 19 were rejected as obvious over RIVARD in view of LAHILLE and MIRKOVIC and further in view of FORTIN WO 03/007828 of which US 2005/0165396 is the nation stage.

The independent claims are believed patentable. The dependent claims are believed patentable at least for depending from an patentable independent claim.

The present invention is non-obvious at least for the reason that the triple combination of the polyaxial stud (5)/damping washer (31)/and adjustable axial stop surface (12, 32) for the connecting part (3) are non-obvious. The combination provides a structure that enables the specific result that tightening of the damping washer can be adjusted, and thus the dampening capability of the device can be adapted to the patient. Such a structure is non-obvious in view of the prior art.

Consider claim 1 first.

The inventive device comprised a polyaxial proximal stud (5) articulated with respect to a base portion (6) enabling body anchoring.

Focusing on the articulation:

1. It is clearly recited that the proximal stud (5) comprises an adjustable axial stop surface (12, 32) against which the connecting part (3) is clamped.

2. It is also clearly recited an elastically deformable structure (31).

3. Finally, it is further clearly recited that the proximal stud (5) and the stop surface (12, 32) enable the adjustment of the axial position of the stop surface (12, 32) with respect to the proximal stud (5) with the elastically deformable structure (31) clamped between stop surface (12, 32) and a bearing surface (17, 18) against which the elastically deformable structure rests.

As recited by claim 1, the stop surface is positioned so that the connecting part (3), when clamped, is not clamped against the base portion (6) so that there remains, after clamping, a possibility of articulated backlash of the proximal stud (5) with respect to the base portion (6).

Thus, the deformable structure (damping washer 31) can be adjusted and thus the dampening capability of the device can be adapted to the patient.

Claim 12 also recites this advantageous structure including a proximal stud (5) articulated with respect to a base portion (6). As in claim 1, a clamping part (4) enables assembly of the connecting part (3) on the corresponding anchoring member, and the proximal stud (5) comprises an axial stop surface (12, 32), against which the connecting part (3) is clamped.

Also, as in claim 1, the connecting part (3), when clamped against the stop surface (12, 32), is not clamped against the base portion (6) so that there remains, after clamping, a possibility of articulated backlash of the proximal stud (5) with respect to the base portion (6).

Claim 12 also recites the elastically deformable structure (31). Claim 12 specifically recites that the proximal stud (5) and the stop surface (12, 32) enable the adjustment of the axial position of the stop surface (12, 32) with respect to the proximal stud (5).

Thus, claim 12 also recites a triple combination where the deformable structure (damping washer 31) can be adjusted and thus the dampening capability of the device can be adapted to the patient.

The Official Action admits that RIVARD does not disclose an elastically deformable structure.

LAHILLE is offered as disclosing an elastically deformable structure (spring 25). Indeed, LAHILLE discloses a spring washer between a screw body and a connection clamp (see

column 6, lines 4 and following), applied to a screw on which the proximal pin is integral with the screw body and has therefore no possibility of articulation with respect to this screw body.

The Official Action makes the generalized statement that "It would have been obvious to one of ordinary skill in the art at the time of the invention to include an elastically deformable structure [spring], such as suggested by Lahille, in the invention of Rivard in order to dampen and thus cancel damaging movements to the rod or screws that could cause cracks or breaks".

The reasoning fails in at least two aspects.

First, the Examiner has not identified how Rivard would be modified to incorporate a spring, while allowing Rivard to continue its intended purpose. See that the connecting part (clamp collar 22) is threaded into the stud (screw 20). This arrangement would need to be completely revised to incorporate a spring.

Second, even if a spring were incorporated, the Examiner has not shown that all the recited features of the present invention would result.

The Examiner has not shown that a modified RIVARD would include the proximal stud (5) and the stop surface (12, 32) being arranged to enable the adjustment of the axial position of the stop surface (12, 32) with respect to the proximal stud (5) with the elastically deformable structure (31) clamped between stop

surface (12, 32) and a bearing surface (17, 18) against which the elastically deformable structure rests. Further, the Examiner has not shown that the modified RIVARD would include the stop surface positioned so that the connecting part (3), when clamped, is not clamped against the base portion (6) so that there remains, after clamping, a possibility of articulated backlash of the proximal stud (5) with respect to the base portion (6). The modified RIVARD would not provide a deformable structure (spring 25) that could be adjusted and thus provide a dampening capability of the device that can be adapted to the patient.

Indeed, on the bottom of Official Action page 4, the Examiner admits that the modified RIVARD would not suggest the thus-recited axial stop. At the top of Official Action page 5, the Examiner asserts that "It would naturally follow that this would in turn adjust the axial position of the connecting member with respect to the proximal stud." This conclusion is vague and unsupported/explained. This conclusion does not support the the specific structure claimed would be suggested by a modified RIVARD.

MIRKOVIC is offered as teaching equipment where the axial position of the connecting member 30 is adjustable on the proximal stud. The Examiner states that it would have been obvious to one of skill "to use an adjustable axial stop ... in order to position the rod properly".

Again, the Examiner has failed to specifically relate the teaching/structure of MIRKOVIC to a specific modification of RIVARD. That is, the Examiner has not said what elements from MIRKOVIC would be incorporated into RIVARD and where such elements would be positioned/operative.

MIRKOVIC discloses pedicular screws 14 in the form of threaded rods, on which are engaged connection parts 30, these connection parts 30 being positioned along the screws 14 by means of nuts 38 and of transverse screws 72 engaging in longitudinal grooves 70 on the screws 14.

MIRKOVIC thus describes a device having no similarity with the device according to the RIVARD document. In particular, it shows a double means (nut 38 and screws 72) for the immobilization of a connection part 30 along a pedicular screw 14 but no axial stop means on the pedicular screws 14 for the connection part and no lower bearing surface for a dampening part.

MIRKOVIC describes a connection part 30 and a nut 38 which are for the most comparable respectively to the clamp 3 and the nut 4 according to the present patent application, or to the clamp 22 and nut 40 of the RIVARD document, and thus does not bring anything more to what is described in RIVARD.

Moreover, the possibility of adjusting the position of the stop according to the claimed invention provides a specifically recited functional relationship.

This possibility of adjustment provides a great advantage, which any device according to one or the other of the cited prior documents does not provide.

RIVARD only shows a fixed axial stop on the pin and no dampening part; to make the invention the person having ordinary skill in the art would have to imagine to put a dampening part between an upper clamping surface and a lower clamping surface and to make the upper clamping surface adjustable with respect to the pin. This combination is not suggested by LAHILLE or MIRKOVIC, which, on the contrary, show structure going clearly away from the invention: rigid screw in LAHILLE; no upper and lower clamping surfaces in MIRKOVIC.

Therefore the specific structure recited is not obvious in view of these references. Both independent claims are non-obvious for these reasons.

Again, the dependent claims are believed allowable at least for depending from an allowable claim.

This amendment is believed to be fully responsive and to put the case in condition for allowance. An early and favorable action on the merits is earnestly requested.

Should there be any matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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